

*CLAIM AMENDMENTS*

1. (Currently Amended) A flow measuring apparatus for measuring flow of a fluid based on a difference in radiation of heat at an upstream side and at a downstream side of a heating member located in the flow of the fluid, comprising:

a heating member;  
an upstream temperature sensor located at an upstream side of the heating member for measuring a first temperature;  
a downstream temperature sensor located at a downstream side of the heating member for measuring a second temperature; and  
a circuit for controlling power supplied to the heating member to maintain at a fixed temperature an average of the first temperature measured by the upstream temperature sensor and the second temperature measured by the downstream temperature sensor ~~at a fixed temperature~~.

2. (Original) The flow measuring apparatus according to claim 1, wherein the flow of the fluid is calculated from the difference between the first temperature measured by the upstream temperature sensor and the second temperature measured by the downstream temperature sensor.

3. (Previously Presented) The flow measuring apparatus according to claim 1, further comprising:

an upstream heating member located between the heating member and the upstream temperature sensor for generating heat based on power supplied to the upstream heating member and controlled by the circuit; and

a downstream heating member located between the heating member and the downstream temperature sensor for generating heat based on power supplied to the downstream heating member and controlled by the circuit, wherein the circuit controls the power supplied to the upstream heating member and to the downstream heating member to maintain the first temperature measured by the upstream temperature sensor and the second temperature measured by the downstream temperature sensor substantially equal and the flow of the fluid is measured based on the difference between the respective powers.

4. (Previously Presented) The flow measuring apparatus according to claim 1, wherein the circuit modifies the fixed temperature based on temperature of the fluid.

5. (Previously Presented) The flow measuring apparatus according to claim 1, wherein the circuit modifies the fixed temperature based on the flow of the fluid.

6. (Previously Presented) A flow measuring apparatus for measuring flow of a fluid based on a difference in radiation of heat at an upstream side and at a downstream side of a heating member located in the flow of the fluid, comprising:

first, second, third, fourth, fifth, and sixth thermally sensitive resistors located in a row from an upstream side to a downstream side, each resistor generating heat and sensing temperature; and

a circuit for controlling power supplied to each of the thermally sensitive resistors, wherein the circuit controls respective powers supplied to the third and the fourth thermally sensitive resistors to maintain temperatures of the second and the fifth thermally sensitive resistors substantially equal, said circuit controls respective powers supplied to the second and the fifth thermally sensitive resistors to maintain temperatures of the first and the sixth thermally sensitive resistors substantially equal, and said circuit measures the flow of the fluid based on the difference between the respective powers supplied to the third and the fourth thermally sensitive resistors and the difference between the respective powers supplied to the second and the fifth thermally sensitive resistors.

7. (Previously Presented) The flow measuring apparatus according to claim 6, further comprising a heating resistor located between the third and the fourth thermally sensitive resistors, wherein the circuit controls power supplied to the heating resistor to maintain an average temperature of the first and the sixth thermally sensitive resistors at a fixed temperature.

8. (Previously Presented) The flow measuring apparatus according to claim 7, wherein the circuit modifies the fixed temperature based on temperature of the fluid.